

## CLAIMS

1. (Currently Amended) A method for auditing an optical network, comprising the steps of:

transmitting a device configuration query to a hardware device in said an optical network; receiving a response to said the device configuration query identifying at least one network device type assoiated with the harware device subsequent to said transmitting;

analyzing said response to said query;

producing an audit report of said response and said analysis subsequent to said analyzing wherein said audit report is based on network configuration information and wherein a placement of information in said audit report is based on information contained in said response; and

transmitting a second at least one status query to said the hardware device responsive to the response to the device configuration query, said second query based on said response to said first query, the status query formatted according to at least one of the network device types associated with the hardware device identified in the response to the device configuration query in order to gather status information of said hardware device;

receiving a response to the status query that includes status information associated with the hardware device;

determining a health condition identifier associated with the hardware device responsive to the status information, the health condition identifier is configured to indicate a health performance-level associated with the hardware device; and

generating an audit report that includes an identification of the network device configuration associated with hardware device received in the response to the device configuration query, and the health condition identifier associated with the hardware device.

2. (Canceled)

3. (Currently Amended) The method deseribed in Claim of claim 1, wherein said the audit report includes recommendations associated with the management of said the optical network.

4. (Currently Amended) The method ~~described in Claim of claim 1, wherein the health condition identifier having an acceptable category, an unacceptable category, or a questionable category, each to indicate a different performance-level associated with the hardware device at least a portion of said network is implemented as a DWDM optical network.~~

5. (Currently Amended) The method ~~described in Claim of claim 1, wherein said hardware device is a portion of said network's infrastructure.~~

6. (Currently Amended) The method ~~described in Claim 1 of claim 4, wherein the health condition identifier is configured to indicate a correlation between identified exceptions to net rules and a total possible exceptions to the net rules, where the net rules include one or more of predefined thresholds of acceptable tolerances for characteristics associated with the hardware device said hardware device is a DWDM device.~~

7. (Currently Amended) The method ~~described in Claim of claim 1, wherein said step of includes transmitting at least the device configuration query or the status query said transmitted queries is accomplished entirely within said through at least a portion of the optical network.~~

8. (Currently Amended) The method ~~described in Claim of claim 1, wherein said transmitted queries are generated by a dedicated network audit device.~~

9. (Currently Amended) The method ~~described in Claim of claim 1, wherein said includes receiving of said received the responses from the hardware device is accomplished entirely within said through at least a portion of the optical network.~~

10. (Currently Amended) The method ~~described in Claim of claim 1, wherein said first device configuration query requests information related to the part number and location in said optical network of said hardware device.~~

11. (Currently Amended) The method described in Claim of claim 1, wherein said second status query is determined by database reference to the hardware network device type of said hardware device.

12. (Currently Amended) The method described in Claim of claim 1, wherein a further step of analyzing said responses to said queries is performed by automated intelligent decision-making.

Claims 13-19 (Canceled)

20. (Currently Amended) A device for auditing an optical network, comprising:  
a transmitting element;  
a receiving element coupled to said transmitting element; and,  
a computing element, coupled to said receiving element, and configured to  
wherein said device for auditing an optical network is capable of formulating and transmitting  
queries to devices in said optical network and receiving responses to said queries wherein first  
and second queries are transmitted to at least one of said devices and with the second query  
being based on said response to said first query and wherein an audit report of said response that  
is based on network configuration information is produced prior to the transmission of said  
second query and wherein a placement of information in said audit report is based on  
information contained in said response

transmit a device configuration query to a hardware device in an optical network through  
the transmitting element;

receive a response to the device configuration query identifying at least one network  
device type associated with the hardware device through the receiving element;

transmit at least one status query to the hardware device through the transmitting element  
responsive to the response to the device configuration query, the status query formatted  
according to at least one of the network device types associated with the hardware device  
identified in the response to the device configuration query;

receive, through the receiving element, a response to the status query that includes status  
information associated with the hardware device;

determine a health condition identifier associated with the hardware device responsive to the status information, the health condition identifier is configured to indicate a health performance-level associated with the hardware device; and

generate an audit report that includes an identification of the network device configuration associated with hardware device received in the response to the device configuration query, and the health condition identifier associated with the hardware device,

21. (Previously Presented) A device as described in Claim 20 wherein said device is further capable of automatically analyzing said responses to said queries.

22. (Previously Presented) A device as described in Claim 21 wherein said device is further capable of presenting the results of said automatic analyzing in a user-readable format.

23. (Previously Presented) A device as described in Claim 20 wherein said device is further capable of making recommendations for appropriate action in the management of said optical network.

24. (Previously Presented) A device as described in Claim 20 wherein at least a portion of said optical network is implemented as a DWDM optical network.

25. (Currently Amended) A computer useable medium having computer useable code embodied therein causing a computer to perform operations comprising:

transmitting a device configuration query to a hardware device in said an optical network;  
receiving a response to said the device configuration query identifying at least one network device type associated with the hardware device subsequent to said transmitting;  
analyzing said response to said query;  
producing a report of said response and said analysis; and  
transmitting a second at least one status query to said the hardware device responsive to the response to the device configuration query wherein said second query is based on said response to said first query and wherein an audit report of said response that is based on network configuration information is produced prior to the transmission of said second query wherein a

placement of information in said audit report is based on information contained in said response, the status query formatted according to at least one of the network device types associated with the hardware device identified in the response to the device configuration query.

receiving a response to the status query that includes status information associated with the hardware device;

determining a health condition identifier associated with the hardware device responsive to the status information, the health condition identifier is configured to indicate a health performance-level associated with the hardware device; and

generating an audit report that includes an identification of the network device configuration associated with hardware device received in the response to the device configuration query, and the health condition identifier associated with the hardware device.

26. (Currently Amended) The computer useable medium in Claim 25, wherein said the audit report includes recommendations associated with the management of said the optical network.

27. (Currently Amended) The computer useable medium described in Claim 25, wherein the health condition identifier having an acceptable category, an unacceptable category, or a questionable category, each to indicate a different performance-level associated with the hardware device at least a portion of said network is implemented as a DWDM optical network.

28. (Previously Presented) The computer useable medium described in Claim 25, wherein said hardware device is a portion of said optical network's infrastructure.

29. (Currently Amended) The computer useable medium described in Claim 25, wherein the health condition identifier is configured to indicate a correlation between identified exceptions to net rules and a total possible exceptions to the net rules, where the net rules include one or more of predefined thresholds of acceptable tolerances for characteristics associated with the hardware device said hardware device is a DWDM device.

30. (Currently Amended) The computer useable medium described in Claim 25, wherein ~~said step of includes transmitting at least the device configuration queary or the status query said-transmitted queries is accomplished entirely within said through at least a portion of the optical network.~~

31. (Previously Presented) The computer useable medium described in Claim 25, wherein transmitted queries are generated by a dedicated network audit device.

32. (Currently Amended) The computer useable medium described in Claim 25, wherein ~~said includes receiving of said received the responses from the hardware device is accomplished entirely within said through at least a portion of the optical network.~~

33. (Currently Amended) The computer useable medium described in Claim 25, wherein ~~said first device configuration query requests information related to the part number and location in said optical network of said hardware device.~~

34. (Currently Amended) The computer useable medium described in Claim 25, wherein ~~said second status query is determined by database reference to the hardware network device type of said hardware device.~~

35. (Previously Presented) The computer useable medium described in Claim 26, wherein a further step of analyzing said responses to said queries is performed by automated intelligent decision-making.

36. (Currently amended) A system for auditing an optical network, comprising:  
transmitting means for transmitting a device configuration query to a hardware device in ~~said an~~ optical network;  
receiving means for receiving a response to ~~said the device configuration query~~ identifying at least one network device type associated with the hardware device subsequent to ~~said transmitting;~~  
analyzing means for analyzing said response to said query; and

report producing means for producing an audit report of said response prior to a transmission of a second query wherein said audit report is based on network configuration information and wherein a placement of information in said audit report is based on information contained in said response;

means for transmitting at least one status query to the hardware device responsive to the response to the device configuration query, the status query formatted according to at least one of the network device types associated with the hardware device identified in the response to the device configuration query;

and wherein said transmitting means transmits a second query to said hardware device, said second query being based on said response to said first query, in order to gather status information of said hardware device

means for receiving a response to the status query that includes status information associated with the hardware device;

means for determining a health condition identifier associated with the hardware device responsive to the status information, the health condition identifier is configured to indicate a health performance-level associated with the hardware device; and

means for generating an audit report that includes an identification of the network device configuration associated with hardware device received in the response to the device configuration query, and the health condition identifier associated with the hardware device.

37. (Currently amended) The system of claim described in Claim 36, wherein said the audit report includes recommendations associated with the management of said the optical network.

38. (Currently amended) The system of claim described in Claim 36, wherein the health condition identifier having an acceptable category, an unacceptable category, or a questionable category, each to indicate a different performance-level associated with the hardware device at least a portion of said network is implemented as a DWDM optical network.

39. (Currently amended) The system of claim described in Claim 36, wherein said hardware device is a portion of said optical network's infrastructure.

40. (Currently amended) The system of claim described in Claim 36, wherein the health condition identifier is configured to indicate a correlation between identified exceptions to net rules and a total possible exceptions to the net rules, where the net rules include one or more of predefined thresholds of acceptable tolerances for characteristics associated with the hardware device said hardware device is a DWDM device.

41. (Currently amended) The system of claim described in Claim 36, wherein said includes means for transmitting at least the device configuration query or the status query is accomplished entirely within said through at least a portion of the optical network.

42. (Currently amended) The system of claim described in Claim 36, wherein said includes means for receiving the responses from the hardware device is accomplished entirely within said through at least a portion of the optical network.

43. (Currently amended) The system of claim described in Claim 36, wherein said first device configuration query requests information related to the part number and location in said optical network of said hardware device.

44. (Currently amended) The system of claim described in Claim 36, wherein said second status query is determined by database reference to the hardware network device type of said hardware device.